DOCUMENT RESUME

ED 103 578 CE 003 089

AUTHOR Conrad, Rowan W.; Pollack, Robert M.
TITLE Factor Analysis of POI Scale Scores with an Adult Rural Disadvantaged Population. An Affective Evaluation Study. Counseling Services Report No. 18.
INSTITUTION Mountain-Plains Education and Economic Development Program, Inc., Glasgow AFB, Mont.
REPORT NO IR-4-IV-041
PUB DATE Jul 74
NOTE 13p.; For other documents describing aspects of the Mountain-Plains program, see CE 003 082-091

EDRS PRICE MF-$0.76 HC-$1.58 PLUS POSTAGE
DESCRIPTORS *College Students; *Comparative Analysis; *Disadvantaged Groups; Individual Characteristics; Mental Health; *Personality Tests
IDENTIFIERS Mountain Plains Program; Personal Orientation Inventory; POI

ABSTRACT

The study examined the Personal Orientation Inventory (POI) scale factor structure using as a population 397 young adults (average age 26) members of rural disadvantaged families of average intelligence attending the Mountain-Plains program. The factor structure was compared with that of a similar study of college students. Tables show factor loadings for 12 POI scales for both studies and partial correlation matrixes for the POI scales characterizing the three factors. Findings indicate that dimensions of positive mental health do not seem to differ markedly between college students (a young population heavily weighed with advantaged persons) and Mountain-Plains students (an older population that is 100 percent disadvantaged). The findings of highly similar factors in the two studies is of particular importance to persons working with populations dissimilar to the largely collegiate group which has been the predominant focus of POI research. Persons dealing with other ages and social classes can now more confidently use the POI. A POI scale intercorrelation matrix for the 397 students and POI scale description are appended. (Author/NH)

ED103578

Mountain-Plains Education & Economic Development Program, Inc.

POST OFFICE BOX 3078 · GLASGOW AFB, MONTANA 59231 · TEL: (406) 524-6221

FACTOR ANALYSIS OF POI SCALE SCORES WITH AN ADULT RURAL DISADVANTAGED POPULATION

AN AFFECTIVE EVALUATION STUDY

COUNSELING SERVICES REPORT NO. 18
(IR-4-IV-041)

July, 1974

Uncorrected Copy
(Results & Interpretation OK)

PRINCIPAL AUTHOR
ROWAN W. CONRAD

CONTRIBUTING AUTHOR
ROBERT M. POLLACK

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

THIS STUDY IS A PRODUCT OF THE
RESEARCH SERVICES DIVISION

DAVID A. COYLE
DIRECTOR

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY
T. R. Flores
Mt-Plains Ed&EcDevProg
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

PRODUCT UNDER DEVELOPMENT (NOT PUBLISHED MATERIAL)
Mountain-Plains retains sole control of these materials and unauthorized use or reproduction, by mechanical or other means, is not permitted.

OE003089

INTRODUCTION

Since its inception, a major problem in the Mountain-Plains Program, has been instrumentation for measurement of population characteristics and changes. The majority of psychometric instruments are not taylored to the disadvantaged population served by Mountain-Plains. This has necessitated the development of new instruments and/or redeveloping and/or revalidating existing instruments.

Shostrum's (1966) Personal Orientation Inventory (POI) was selected for use as the best available measure of those self variables found to be a major source of counseling concern with the student population. However, the clinical development base and the heavily collegiate norming and literature study base do not insure utility with the Mountain-Plains population. "Clinical" use, local norming, factor analysis, and canonical analysis with an instrument not developed with inpatients and not intended for use with the middle class are methods used to explore validity of the POI for Mountain-Plains use.

This study examines the POI scale factor structure and compares results to a similar study of college students by Tosi and Hoffman (1972). To the extent that the factor structure resembles that found by Tosi and Hoffman, confidence in extrapolating collegiate POI study results to Mountain-Plains Students will be enhanced.

METHODOLOGY

Subjects consisted of 397 young adult (average age of 26) members of rural disadvantaged families of average intelligence (mean GATB G score of 98) attending the Mountain-Plains Program (9% of Mountain-Plains students are single female heads of household and the remainder are married couples). Subjects consist of all adult

family members entering the Mountain-Plains Program from mid-summer, 1973 through early spring, 1974. Defining selection criteria (Mountain-Plains, 1973) are typical descriptors of disadvantaged populations.

Data Collection. The POI is administered, under standard testing conditions, by the Counseling Aide, to all entering students in the Counseling Services conference and testing room during orientation (the first full week in program). The aide subsequently hand scored the tests and codes scores for computer analysis.

Analysis. The twelve scale scores were subjected to a standard principal components factor analysis using the Biomed program. Factors with eigenvalues greater tha. one were rotated, using the Varimax rotation to yield an orthogonal rotated factor matrix.

RESULTS

The variables loading most heavily on Factor I are sensitivity to needs and feelings (Fr)[1] and acceptance of agressive feelings (A). This factor also shows loadings of 0.60 or greater on inner locus of control (I), the ability to have warm interpersonal relationships (C), and free behaviored expression of feelings (S). As the I scale loads on all factors to some extent, and is also heavily represented by item content in (has spuriously high correlations with) other scales it is not included in the partial intercorrelation matricees (Tables 2, and 4). The factor seems to measure a strong intrapersonal and interpersonal perceptivity. with the Fr and C scales having the highest mean intercorrelation. The factor is labeled "Awareness". Tosi and Hoffman's Study (1972), resulted in a three factor description with similar loadings. Their label for the corresponding factor was "Extroversion".

---

1 The POI scales intercorrelation matrix is included as Appendix A and the scales are briefly described in Appendix B.

The variables loading most heavily on Factor II are viewing the nature of man (Nc) as essentially positive, understanding the meaningful relationship between opposites (Sy), and endorcement of positive mental health values (SAV).

This factor seems to be describing optimism - a sophisticated perception of reality, and positive mental health values. It is labeled "Sophisticated Optimism". Tosi and Hoffman labeled their corresponding factor "Openmindedness".

The variables loading most heavily on Factor III are the ability to focus attention on current experience (Tc), flexibility in applying values (Ex), acceptance of self with weakness (Sa), and capacity to have warm interpersonal relations (C).

This factor seems to describe a person who is closely in touch with his environment, has well formulated values, accepts weaknesses, and has warm genuine interpersonal relationships. "Integration" would appear to be an appropriate label for the factor. The Tosi and Hoffman label for the corresponding factor was "Existential Nonconformity". The mean Correlation in Table 4 indicates the Ex scale to be especially descriptive as regards this factor; indicating the Tosi and Hoffman description would also be appropriate to the current factor.

TABLE 1

FACTOR LOADINGS FOR TWELVE POI SCALES

	FACTORS							
	I		II		III			
SCALE	M-P	(T-H)	M-P	(T-H)	M-P	(T-H)	h^2	
Tc	-.02	(.21)	.30	(.59)	.72	(.55)	.61	(.70)
I	.66	(.75)	.38	(.19)	.58	(.60)	.92	(.96)
SAV	.43	(.68)	.76	(.57)	.09	(-.01)	.77	(.78)
Ex	.41	(.38)	.07	(.01)	.76	(.79)	.58	(.77)
Fr	.83	(.78)	.08	(-.04)	.21	(.29)	.74	(.68)
S	.63	(.80)	.38	(.08)	.26	(.31)	.61	(.74)
Sr	.44	(.64)	.46	(.45)	-.14	(.08)	.42	(.62)
Sa	.35	(.36)	.07	(-.04)	.75	(.75)	.69	(.69)
Nc	.04	(.02)	.81	(.81)	.14	(.03)	.68	(.66)
Sy	.09	(-.10)	.72	(.73)	.38	(-.09)	.67	(.54)
A	.78	(.84)	.20	(-.07)	.28	(.18)	.73	(.74)
C	.63	(.62)	.01	(-.16)	.62	(.61)	.78	(.78)
Cumulative Portion of Total Variance	.48	(.39)	.61	(.57)	.70	(.77)		

NOTE: Factor loadings in parentheses are from Tosi and Hoffman's (1972) study with college students.

TABLE 2

PARTIAL CORRELATION MATRIX FOR POI SCALES CHARACTERIZING FACTOR I

	Fr	A	S	C	Mean Correlation
Fr	1.00	.71	.51	.76	.67
A	.71	1.00	.55	.60	.62
S	.51	.55	1.00	.63	.57
C	.76	.60	.63	1.00	.67

TABLE 3

PARTIAL CORRELATION MATRIX FOR POI SCALES CHARACTERIZING FACTOR II

	SAV	Nc	Sy	Mean Correlation
SAV	1.00	.52	.61	.57
Nc	.52	1.00	.52	.52
Sy	.61	.52	1.00	.57

TABLE 4

PARTIAL CORRELATION MATRIX FOR POI SCALES CHARACTERIZING FACTOR III

	Tc	Ex	Sa	C	Mean Correlation
Tc	1.00	.44	.46	.39	.43
Ex	.44	1.00	.64	.76	.63
Sa	.46	.64	1.00	.60	.57
C	.39	.76	.60	1.00	.60

DISCUSSION

The difference in factor labeling would seem to be a matter of semantics and personal preference except for factor one. The extroversion description would appear to rely on the S scale loading which does load stronger (0.80 vs 0.63) in the Tosi and Hoffman study. Although the Tc and SAV loadings differ on factor two and the Tc on factor three between studies, this does not seem to leave as greatly affected the respective author's perception of the factor description.

Dimensions of positive mental health do not seem to differ markedly between college students (a young population heavily weighed with "advantaged" persons) and Mountain-Plians students (an older population - mean age 26 vs mean age 19 that is 100% disadvantaged). As the POI scales are not particularly sex sensitive the over-representation of female subjects (77%) in the Tosi and Hoffman study probably does not unduly influence results. The findings of highly similar factors in these two studies is of particular importance to persons working with populations dissimilar to the largely collegiate group which has been the predominant focus of POI research. Persons dealing with other ages and social classes can now more confidently use the POI. Likewise, the theoretical basis for the POI gains further validation from these results.

Although the questions of parsimony raise[d] by Tosi and Hoffman retains its validity, Shostrum's contention that the scales are [not] intended to be independent (i.e., that the concepts used each have explanatory [val]ue whether discussed separately or grouped into factors) would seem a valid [pra]ctical (if not a parsimonious statistical) argument.

FORMATIVE IMPLICATIONS

The assumption of validity for POI use with Mountain-Plains students, emerges as credible. Because the POI was developed with and for other populations only theory based validity arguements and subjective local "clinical use" experience were previously available to support POI use at Mountain-Plains.

REFERENCE CITED

Mountain-Plains. An Evaluation and Comparison of the Selection Criteria as Used in the Recruitment and Selection Process of Mountain-Plains Education and Economic Development Program, Inc. January 31, 1973. (Revision addendum September, 1973).

Shostrum, E.L. EITS Manual for the Personal Orientation Inventory. San Diego: Educational and Industrial Testing Service, 1972 ed.

Tosi, D.J. and S. Hoffman. "A Factor Analysis of the Personal Orientation Inventory," Journal of Humanistic Psychology, 12, Spring, 1972, pages 86-93.

APPENDIX A

POI SCALE INTERCORRELATION MATRIX FOR 397 ENTERING MOUNTAIN-PLAINS STUDENTS

Tc	1											
I	47	1										
SAV	29	63	1									
Ex	44	74	32	1								
Fr	21	68	42	46	1							
S	32	71	55	47	51	1						
Sr	20	36	41	14	25	35	1					
Sa	46	72	26	64	42	43	17	1				
Nc	23	45	52	19	21	32	26	21	1			
Sy	35	50	61	43	26	38	20	33	52	1		
A	26	72	51	51	71	55	26	47	22	41	1	
C	39	77	33	76	63	51	24	60	17	31	60	1
	Tc	I	SAV	Ex	Fr	S	Sr	Sa	Nc	Sy	A	C

Decimal points omitted.

APPENDIX B

Scale Description for the POI*

High Score Description		Low Score Description
TIME COMPETENT, Lives in the present.	T_c	TIME INCOMPETENT, Lives in the past or future.
INNER-DIRECTED, Independent, Self-Supportive.	I	OTHER DIRECTED, Dependent, seeks support of others' views.
SELF-ACTUALIZING VALUE, Holds values of self-actualizing people.	SAV	Rejects values of self-actualizing people.
EXISTENTIALITY, Flexible in application of values.	Ex	Rigid in application of values.
FEELING REACTIVITY, Sensitive to own needs and feelings.	Fr	Insensitive to own needs and feelings.
SPONTANEITY, Freely expresses feelings behaviorally.	S	Fearful of expressing feelings behaviorally.
SELF-REGARD, Has high self-worth.	Sr	Has low self-worth.
SELF-ACCEPTANCE, Accepting of self in spite of weaknesses.	Sa	Unable to accept self with weaknesses.
NATURE OF MAN, CONSTRUCTIVE, Sees man as essentially good.	Nc	Sees man as essentially evil.
SYNERGY, Sees opposites of life as meaningfully related.	Sy	Sees opposites of life as antagonistic.
ACCEPTANCE OF AGGRESSION, Accepts feelings of anger or aggression.	A	Denies feelings of anger or aggression.
CAPACITY FOR INTIMATE CONTACT, Has warm interpersonal relationships.	C	Has difficulty with warm interpersonal relations.

*Descriptions adapted from POI Profile Form. Educational & Industrial Testing Service, San Diego, CA